

B. In the Claims

Please amend claims 1-2, 10, 14, 19-25, and 27-31 as follows.

Please add new claims 33-44 as presented below.

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for identifying a compound capable of modulating cellular glycosylation, comprising:

- a) contacting GTRAP3-18 with a test compound; and
- b) determining whether the test compound binds to GTRAP3-18,

wherein a compound that binds to GTRAP3-18 is identified as a ~~compound~~ compound capable of modulating cellular glycosylation.

2. (Currently Amended) A method for identifying a compound capable of modulating cellular glycosylation, comprising:

- a) contacting a cell which expresses GTRAP3-18 with a test compound; and
- b) assaying the ability of the test compound to modulate the expression of a GTRAP3-18 nucleic acid molecule or polypeptide, or the activity of a GTRAP3-18 polypeptide, wherein a compound that can modulate the expression of a GTRAP3-18 nucleic acid molecule or polypeptide or the activity of a GTRAP3-18 ~~polypeptide~~ polypeptide is identified as a compound capable of modulating cellular glycosylation.

3. (Original) The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid or polypeptide expression or GTRAP3-18 polypeptide activity is determined by detecting the level of glycosylation of a GTRAP3-18 target molecule.

4. (Original) The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of glutamate transport in the cell by a GTRAP3-18 target molecule.

5. (Original) The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of GABA transport in the cell by a GTRAP3-18 target molecule.

6. (Original) The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of dopamine transport in the cell by a GTRAP3-18 target molecule.

7. (Original) The method of claim 2, wherein the ability of the compound to modulate GTRAP3-18 nucleic acid expression or GTRAP3-18 polypeptide activity is determined by detecting the level of amino acid transport in the cell by a GTRAP3-18 target molecule.

8. (Original) A method for identifying a compound capable of modulating cellular glycosylation comprising:

- a) contacting GTRAP3-18 with a GTRAP3-18 target molecule under conditions that allow formation of a complex between GTRAP3-18 and the GTRAP3-18 target molecule;
- b) contacting the complex with a test compound; and
- c) comparing the amount of complex formed in the presence of the compound with the amount of complex formed in the absence of the compound,

wherein a compound which modulates the amount of complex formed, as compared to the amount of complex formed in the absence of the compound, is identified as a modulator of cellular glycosylation.

9. (Original) The method of any one of claims 3, 4, or 8, wherein the GTRAP3-18 target molecule is a glutamate transporter.

10. (Currently Amended) The method of claim 9, wherein the glutamate glutamate transporter is selected from the group consisting of: GLAST/EAAT1, GLT-1/EAAT2, EAAC1/EAAT3, EAAT4, and EAAT5.

11. (Original) The method of any one of claims 3, 5, or 8, wherein the GTRAP3-18 target molecule is a GABA transporter.

12. (Original) The method of any one of claims 3, 6, or 8, wherein the GTRAP3-18 target molecule is a dopamine transporter.

13. (Original) The method of any one of claims 3, 7, or 8, wherein the GTRAP3-18 target molecule is an amino acid transporter.

14. (Currently Amended) The method of any of claims 1 ~~-13~~, 2, or 8, wherein the compound is capable of treating a glycosylation associated disorder.

15. (Original) The method of claim 14, wherein the glycosylation associated disorder is a neurologic or psychiatric disorder.

16. (Original) The method of claim 15, wherein the neurologic or psychiatric disorder is selected from the group consisting of: epilepsy, stroke, traumatic injury, chronic neurological disorders such as Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, Huntington's disease, spinocerebellar ataxia, general neuromuscular disorders involving acute and chronic nerve or muscle injury, CNS inflammation, and schizophrenia

17. (Original) The method of claim 15, wherein the glycosylation associated disorder is selected from the group consisting of an inflammatory disorder, AIDS, and cancer.

18. (Original) A method for modulating glycosylation in a cell comprising contacting a cell with a GTRAP3-18 modulator, thereby modulating glycosylation in the cell.

19. (Currently Amended) The method of any one of claims ~~2-7 or 9-18~~ 1, 2, or 8, wherein the cell is a neuronal cell.

20. (Currently Amended) The method of ~~any one of~~ claims 18-19, wherein the GTRAP3-18 modulator is a small molecule.

21. (Currently Amended) The method of ~~any one of~~ claims 18-20, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 polypeptide activity.

22. (Currently Amended) The method of ~~any one of~~ claims 18-21, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 nucleic acid or polypeptide expression.

23. (Currently Amended) A method for treating a subject having a glycosylation associated disorder comprising administering to the subject a GTRAP3-18 modulator, thereby treating said the subject having a glycosylation associated disorder.

24. (Currently Amended) The method of claim 23, wherein said the glycosylation associated disorder is a neurologic or psychiatric disorder.

25. (Currently Amended) The method of claim 24, wherein the neurologic or psychiatric disorder is selected from the group consisting of: epilepsy, stroke, traumatic injury, chronic neurological disorders such as Alzheimer's disease, amyotrophic lateral sclerosis, Parkinson's disease, Huntington's disease, spinocerebellar ataxia, general neuromuscular disorders involving acute and chronic nerve or muscle injury, CNS inflammation, and schizophrenia.

26. (Original) The method of claim 23, wherein the glycosylation associated disorder is selected from the group consisting of an inflammatory disorder, AIDS, and cancer.

27. (Currently Amended) The method of any one of claims 23–26, wherein the GTRAP3-18 modulator is administered in a pharmaceutically acceptable formulation.

28. (Currently Amended) The method of any one of claims 23–27, wherein the GTRAP3-18 modulator is administered using a gene therapy vector.

29. (Currently Amended) The method of any one of claims 23–27, wherein the GTRAP3-18 modulator is a small molecule.

30. (Currently Amended) The method of ~~any one of~~ claims 23–29, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 polypeptide activity.

31. (Currently Amended) The method of ~~any one of~~ claims 23–29, wherein the GTRAP3-18 modulator is capable of modulating GTRAP3-18 nucleic acid or polypeptide expression.

32. (Original) A method for modulating glycosylation in a subject comprising administering to the subject a GTRAP3-18 modulator, thereby modulating glycosylation in the subject.

33. (New) A method of diagnosing a glycosylation-associated disorder comprising: contacting a biological sample from a subject to be diagnosed and a control biological sample from a control subject with an agent that detects GTRAP3-18 protein or nucleic acid, thereby detecting levels of GTRAP3-18 protein or nucleic acid in the biological sample and in the control biological sample; and

comparing the level of GTRAP3-18 protein or nucleic acid in the biological sample to the level in the control biological sample as an indicator of glycosylation disorder.

34. (New) The method of claim 33, wherein the agent is a nucleic acid.

35. (New) The method of claim 33, wherein the agent is an antibody.

36. (New) The method of claim 33, wherein the agent is detectably labeled.

37. (New) A method of identifying a subject having or at risk of having a glycosylation associated disorder comprising:
contacting a biological sample from the subject with an agent that detects GTRAP3-18 protein or nucleic acid; and
determining the level of protein or nucleic acid, wherein a difference in the level of GTRAP3-18 protein or nucleic acid in the sample as compared to the level in a normal sample, is indicative of a subject having or at risk of having a glycosylation disorder.

38. (New) The method of claim 37, wherein the agent is a nucleic acid.

39. (New) The method of claim 37, wherein the agent is an antibody.

40. (New) The method of claim 37, wherein the agent is detectably labeled.

41. (New) The method of claim 37, wherein the GTRAP3-18 nucleic acid contains a mutation as compared with wild-type GTRAP3-18 nucleic acid.

42. (New) A method for monitoring the effectiveness of a treatment regimen for a glycosylation associated disorder, wherein the treatment comprises administration of a GTRAP3-18 modulating agent to the subject, the method comprising:

obtaining a pre-administration sample from a subject prior to administration of the agent;
detecting the level of expression of a GTRAP3-18 protein, mRNA, or genomic DNA in the pre-administration sample, or the level of glycosylation of a protein such as an EAAT in the pre-administration sample;

In re Application of:
Rothstein and Ruggiero
Application No.: Not Yet Assigned
Filed: July 15, 2005
Page 10

PATENT
Attorney Docket No.: JHU2090-1

detecting the level of expression or activity of the GTRAP3-18 protein, mRNA, or genomic DNA in post-administration samples, or the level of glycosylation of a protein such as an EAAT in the post-administration sample; and

comparing the level of expression or activity of the GTRAP3-18 protein, mRNA, or genomic DNA, or the level of glycosylation of a protein such as an EAAT in the pre-administration sample with the GTRAP3-18 protein, mRNA, or genomic DNA, or the level of glycosylation of a protein such as an EAAT in the post administration sample or samples.

43. (New) The method of claim 42, further comprising altering the administration of the agent to the subject accordingly.

44. (New) The method of claim 42, wherein the agent is an agonist or antagonist of GTRAP3-18 nucleic acid or protein.